

FRACTION ACTION™

AMIGA™

LOADING PROCEDURES

- (1) Kickstart 1.2 is required. Insert Kickstart Version 1.2 into your Amiga's disk drive and turn on your computer and monitor.
 - (2) When the computer asks for Workbench insert the Fraction Action program disk. DO NOT INSERT THE WORKBENCH DISK AS THAT IS INCLUDED WITH THE FRACTION ACTION PROGRAM DISK.
 - (3) You will be in the CLI environment. When the prompt appears (1), type fracac. The program will boot automatically.
 - (4) The title and credit screens will appear. Press any key or click the mouse to continue from screen to screen.
- **THE DISK IS ACCESSED BY THE COMPUTER DURING ENTIRE USE OF THE PROGRAM. DO NOT REMOVE IT FROM THE DRIVE WHILE THE PROGRAM IS BEING USED.**

OBJECT OF GAME

You're trapped in the basement of the mad professor's mansion. The only way to escape is to have the gatekeepers unlock the electrified gates for you.

This is accomplished by answering fraction problems correctly, and then using the arrow keys to move, but you'd better move fast and be sure to jump over the slides. If you answer incorrectly, full detailed explanation screens are presented to help you understand how to solve the problem, however, occasionally the mansion's ghost may catch you and throw you down the slide.

Once you've passed through all the gates, you then must catch the ghost who will fly you to freedom.

SETTING THE PARAMETERS

- (1) Enter Player(s) name and Press RETURN or click the mouse button. Use the backspace key to make corrections.
- (2) **TIMER OPTION** — If you don't wish to be timed while answering problems, simply do nothing. The default parameter is set to 0. If you wish to be timed, use the mouse to move the arrow icon to the right of the 00 on the timer option box and click the mouse button. Press the backspace key twice and then enter a number from 1-99 that will determine the number of seconds you will get to solve the problem. Press RETURN.

If the time runs out before the problem is answered, the gatekeepers will NOT permit you to pass and the explanation screens will appear.

- (3) Use your mouse to select difficulty level. Difficulty levels are determined as follows:

*EASY — All problems generated will have the same denominator (bottom number).

*MEDIUM — The fractions generated will have a denominator less than 6.

*HARD — The fractions generated will have a denominator less than 10.

- (4) **NUMBER OF SCREENS** — Click on either 1 or 2. Selecting 2 screens will make for a longer game and will require the player(s) to solve almost twice as many problems before catching the ghost and escaping from the mansion.
- (5) Click on OK to proceed.
- (6) Click on QUIT to end.
- (7) Now click the mouse in the diamond to select your problem type.
- (8) Click OK to continue.

If there is a second player, set parameters for that player as detailed above.

HOW TO PLAY THE GAME

****PLEASE NOTE THAT PRESSING THE ESC KEY AT ANY TIME DURING THE ACTUAL GAME WHILE THE COMPUTER IS WAITING FOR AN ANSWER TO A PROBLEM WILL ALLOW YOU TO ESCAPE AND RESET THE PARAMETERS OR QUIT THE PROGRAM.**

Fraction problems will appear on the top of the screen. Simply answer the problems. If the answer is correct, a message will appear on the top of the screen and the gatekeeper will unlock the electrified gate. Once the problem is answered correctly, you can move your man. Your man will be transported to the next level once you're under the teleporters.

KEYBOARD MOVEMENT

The Left and Right Arrow Keys control movement. Press the Spacebar to jump over the slides. Your man can move in the wrong direction (backwards), so be careful. Your man should always be moving in the direction of the teleporters. Just pressing the arrow keys once, when the gatekeeper has removed the gate, is sufficient. There is no need to hold the arrow key down or press it repeatedly.

The player that passes through the last electrified gate first will get a chance to catch the ghost. The other player will be imprisoned forever. Move your man, using the arrow keys to move along the floors and spacebar to jump over the slides, to catch the ghost. You must touch the ghost. He will then fly you to freedom.

THE FINAL ESCAPE

Player(s) will have a short amount of time to catch the ghost, after which the number of correct answers and the number of incorrect answers will be displayed.

ANSWERING FRACTION PROBLEMS

After calculating the answer (beginning players will most likely need pencils and paper to work out their solutions), enter your answer by first typing the numerator (top number), then PRESSING the / KEY and lastly typing the denominator (bottom number). PRESS RETURN to register your answer.

PRESS the BACKSPACE KEY to change the answer for the numerator or denominator. If you decide to change the answer for the numerator, you must do so before the / KEY is pressed. Once the / KEY has been pressed, the numerator may not be changed and the computer will be waiting for the denominator to be entered and the return key to be pressed.

In order to be considered as correct, problems must be reduced and put in lowest terms.

For example: $4/6 + 5/6 = 9/6$ will be considered incorrect since the correct answer in lowest terms is $3/2$. Whole number answers must be given where applicable. For example: $6/5 + 4/5 = 10/5 = 2$. Two is the answer the computer will look for. Although $2/1$ will be accepted as a correct answer, since it is theoretically in lowest terms, we discourage using that answer because children should understand the concept of whole numbers, that is, $2/1$ is the same as 2.

NOTE: AN ANSWER SUCH AS $2\ 1/2$ WILL NOT BE ACCEPTED BY THE COMPUTER, THE CORRECT RESPONSE ACCEPTED BY THE COMPUTER IS $5/2$.

A NOTE TO PARENTS AND TEACHERS:

Fraction Action will motivate its players to learn fraction manipulation by combining the appeal of an arcade game with the drill and practice and tutorial methods of computer aided instruction.

It is recommended that you carefully read the section of documentation explaining answering fraction problems to the players so they will understand the answer format that the computer is looking for.

Also, it is not recommended that the timer option be selected at first, since fraction manipulation can be a difficult concept to grasp. Please make sure all players are equipped with scratch paper and pencils to permit them to do calculations.

Research has shown that many students who have problems with decimals, percents and algebra have a very weak foundation in fractions. Fractions can be one of the first stumbling blocks in mathematics.

With this in mind, Unicorn's developmental team has attempted to design its most exciting arcade type game with the fundamentals of fraction manipulation so that all players of Fraction Action will have mastered these operations with great success.

PROGRAM DESIGN by June Stark, founder and director of The Computer Learning Center for Children, math teacher, former programmer and systems analyst for major corporations. She has also served as an Associate Officer of the United Nations where she did programming in their Accounts Division. Presently, she is actively involved in creating educational programs for all micro-computers.

PROGRAMMING by Doug Phillipson and Christopher Greve. **ARTWORK** by Joseph Hewitt IV.